

### Remarks

Claims 1-3, 5-18 and 20 are pending in this application. Claims 4 and 19 have been cancelled herein. The Examiner has rejected claims 1-20 as being obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 6,282,601 to Goodman et al. (hereinafter “Goodman”), in view of U.S. Patent Application No. 20040019722 to Sedmak (hereinafter “Sedmak”).

#### **A. Independent Claims 1, 8, and 15**

A prima facie case of obviousness requires a showing that all of the claim limitations of the rejected claims are taught or suggested by the prior art. Manual of Patent Examining Procedure 2143 and 2143.03. “All words of a claim must be considered in judging the patentability of that claim against the prior art.” In re Wilson, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970). The pending claims are not obvious over the combination of Goodman and Sedmak because the combination fails to teach or suggest all of the elements of Applicant’s claims. Specifically, the combination of Goodman and Sedmak fails to teach or suggest that each processor be operable to access the semaphores associated with the processors of the system on a **non-exclusive** basis, as required by the claims of the present invention.

The Examiner states that the semaphores (in the form of semaphore request and grant bits) are stored in control registers 106(1) and 106(2). (Office Action, p.3) However, Sedmak, in Figure 1, teaches cores requesting (through the request and grant bits in their registers) a *single* semaphore (not shown) which controls access to multiple resources. (Sedmak, [0018]). Even when Sedmak discusses multiple semaphores, *only one* of the cores 104(1) or 104(2) may be granted a semaphore at a time. (Sedmak, [0019]). That is, a core in Sedmak is not uniquely associated with a semaphore; a core must always request and be *exclusively* granted a semaphore through the arbitration unit. (Sedmak, [0017]) The Examiner states that each

processor has access to the semaphores via the CAU unit (110), which arbitrates all semaphore requests. (Office Action, p.4) The CAU unit clearly determines which *one* core has *exclusive* access to the semaphore(s) in question, in clear contrast to the Examiner's assertion that *each* processor has access to the semaphores in a **non-exclusive** manner. (Sedmak, [0017] and [0019]) Finally, the Examiner's assertion that each processor has access to the semaphores via the CAU unit is not fully explained; the Examiner stated that the semaphores reside in the control registers 106(1) and 106(2) but failed to show how the CAU provides each core non-exclusive access to the semaphores residing in the control registers of the other cores. Thus, Sedmak does not teach or suggest multiple semaphores, **each** of which may be accessed **independently** and in a **non-exclusive** manner by each processor, as described by Applicant's Specification (Spec., p.5:10-15) Sedmak fails to teach or suggest that each processor be operable to access the semaphores associated with the processors of the system on a **non-exclusive** basis, as required by the claims of the present invention. The Examiner does not cite to Goodman as curing the deficiencies of Sedmak.

For the reasons presented above, the combination of Goodman and Sedmak fails to teach or suggest all of the elements of independent claims 1, 8, and 15. Thus, a prima facie case of obviousness is not shown, and the rejection of independent claims 1, 8, and 15 should be withdrawn.

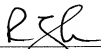
**B. The Rejection of Dependent Claims 2,3, 5-7, 9-14, 16-18, and 20**

The rejection of dependent claims 2,3, 5-7, 9-14, 16-18, and 20 will not be discussed individually herein, as each of these claims depends, either directly or indirectly, from an otherwise allowable base claim.

**Conclusion**

Applicant respectfully submits that the pending claims 1-3, 5-18 and 20 of the present invention, as amended, are allowable. Applicant respectfully requests that the rejection of the pending claims be withdrawn and that these claims be passed to issuance.

Respectfully submitted,



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